The National Academies of
SCIENCES · ENGINEERING · MEDICINE

Global Health and the Future Role of the United States

Why Invest in Global Health?

- Globalization and increased travel and trade
  - Led to increase in global health security threats
  - Also provides rapid information sharing and opportunities for shared solutions to common problems.
- Securing protection against global health threats
- Promoting productivity and economic growth in other countries
- Investing in global health over the next 20 years can save the lives of millions of children and adults, and result in positive returns on investment.
  - The benefits in lower-middle income countries can exceed the costs up to 20 fold.

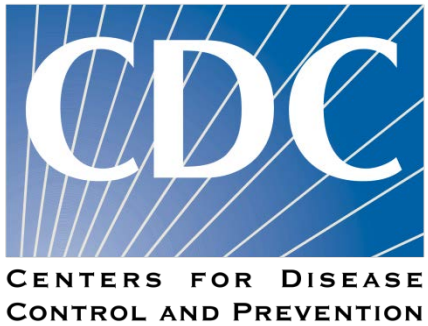
The Committee

- **JENDAYI FRAZER** (Co-Chair), Council on Foreign Relations
- **VALENTIN FUSTER** (Co-Chair), Mount Sinai Medical Center
- **GISELA ABBAM**, GE Healthcare
- **AMIE BATSON**, PATH
- **FREDERICK BURKLE, JR.**, Harvard University
- **LYNDA CHIN**, University of Texas, Houston
- **STEPHANIE FERGUSON**, Stanford University
- **LIA HASKIN FERNALD**, School of Public Health, University of California, Berkeley
- **PETER LAMPTEY**, FHI360
- **RAMANAN LAXMINARAYAN**, Centers for Disease, Dynamics, and Policy
- **MICHAEL MERSON**, Duke Global Health Institute, Duke University
- **VASANT NARASIMHAN**, Novartis
- **MICHAEL OSTERHOLM**, Center for Infectious Disease Research and Policy, University of Minnesota, Minneapolis
- **JUAN CARLOS PUYANA**, University of Pittsburgh

Committee Process

- Hosted 4 deliberative committee meetings
  - September 29th and December 6th open for information gathering and public comment
  - September 30th, December 7th, January 5-6th, and February 2-3rd were closed to committee only
- Solicited information via Survey Gizmo from 40 CDC Country directors and 12 USAID Mission employees (see Chapter 1 for details)
- Prepared a 10 chapter report
  - Underwent expert review by 17 experts, mirroring report content

Study Sponsors



The Charge, in brief

The Committee was asked to:

Assess the current global health landscape and offer recommendations on future priorities

Review the U.S. global health enterprise and offer recommendations to improve responsiveness, coordination, and efficiency

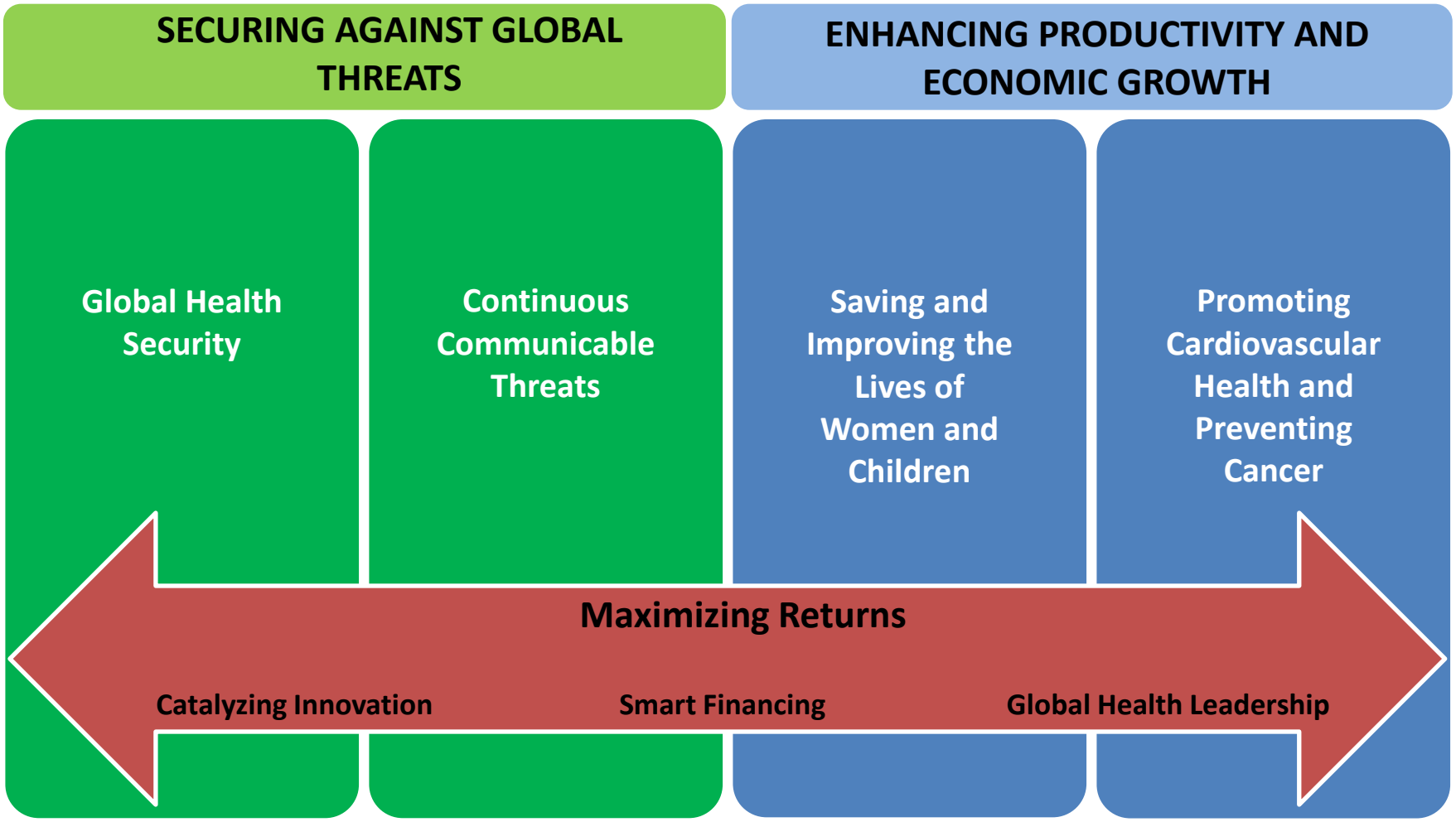
Relevant global changes considered were:

- Globalization
- Growing frequency of infectious disease epidemics & AMR
- Culmination of the MDGs
- Increasing privatization of health care
- Increasing importance of NCDs

Key Messages

- Priority areas for Action:
  - Achieve global health security
  - Maintain a sustained response to continuous threats (HIV, TB, malaria)
  - Save and improve the lives of women and children
  - Promote cardiovascular health and prevent cancer
- Embrace system focused concepts of integration, capacity building, and partnership.
- Change the way we do business in global health to better enable innovation:
  - Accelerating development of medical products
  - Enabling harmonized digital health infrastructure
  - Optimizing financing strategies
  - Maintaining U.S. leadership in global health architecture

Report Conceptual Model



Report Details

Global Health Security

Current State

Key Threats:

- Zoonotic Spillover
- Pandemic Influenza
- Antimicrobial Resistance

Key Vulnerabilities:

- Poor Public Health Infrastructure & Preparedness
- Vulnerable Supply Chains & Slow MCM Development
- Fragile states threatening global successes

Pandemic	Death Toll	Economic cost
2003 SARS	774	$40 - $54 billion in GDP losses
2014 Ebola	11,325	$2.2 billion in GDP losses; $4.5 billion in recovery

Global Health Security

Challenges

- Rapid urbanization and biodiversity loss
- Complacency following periods with no emergency
  - U.S. preparedness funding continually reduced
  - Venezuela malaria resurgence
- Need to work across country and regional lines
- For the United States – no clear leadership or division of responsibilities for agencies involved in an international response

Global Health Security

Needed Actions

Domestic: U.S. needs a new proactive approach for public health emergencies, embracing prevention and preparedness, which includes

- Creation of a single **coordinating body** to guide international public health emergency responses
- **Dedicated funding** for domestic preparedness, response, and medical product development
- Improved **coordination** with multilateral organizations

Global Health Security

Needed Actions

International: It is necessary to build core preparedness capacities and public health infrastructure internationally as well as domestically:

- Need for a coordinated and dedicated effort to **combat AMR nationally and** internationally
- Build **public health capacity** in LMICs including disaster risk reduction and disaster response.
- Align with effective multilateral organizations

Continuous Threats: HIV, TB, Malaria

Global Progress since 2000

HIV/AIDS	Tuberculosis	Malaria
incidence	incidence	incidence
↓ 35%	↓ 23%	↓ 41%
mortality	mortality	mortality
↓ 42%	↓ 34%	↓ 62%

Securing Against Global Threats → Enhancing Productivity and Economic Growth → Maximizing Returns

Continuous Threats: HIV, TB, Malaria

Remaining Challenges

- **HIV** - 2 million new infections in 2015.
- **TB** surpassed HIV as leading infectious disease killer & rising resistance and frequent coinfection with HIV complicates testing and treatment
- **Malaria** saw 212 million cases in 2015 - rising drug and insecticide resistance is threatening global progress against malaria

COMPLACENCY

Continuous Threats: HIV, TB, Malaria

Needed Actions

- PEPFAR should be funded at current levels with more flexible funding targets. It should continue **transitioning to national governments**, adapt its platform to **focus on chronic care**, place stronger emphasis on prevention, including interventions targeting **gender-based violence. The Global Fund should be supported.**
- CDC, NIAID, and USAID should conduct a thorough **global threat assessment of TB** and execute a plan for developing and investing in new diagnostics, drugs, vaccines, and delivery systems.
- The U.S. government should continue its commitment to fighting malaria through the **President's Malaria Initiative**.

Women and Children's Health

Current State

- Global mortality rates for children under 5 have been cut by more than half since 1990, and maternal mortality decreased by nearly half.
- Despite large reductions in mortality rates, nearly 6 million children and more than 300,000 mothers die each year.
- 250 million children fail to reach their development potential because of extreme poverty and stunting.

Women and Children's Health

Remaining Challenges

- Proven interventions exist to increase survival though some can be difficult to scale
- Undernutrition is responsible for nearly half of all deaths for children under 5, as well as stunting and poor development outcomes
- Health care services and social services, and women's health and newborn/infant health services are often delivered separately

Women and Children's Health

Needed Actions

- Investments in ending preventable maternal and child deaths should be accelerated and include **evidence-based interventions (immunizations, IMCI, nutrition, prenatal care and safe delivery, family planning)**.
- USAID, PEPFAR and implementing partners should **incorporate child development interventions** that foster a "thrive" agenda into current programs
- This can be achieved if health systems are more **patient-centered** and package services for women and children.

Cardiovascular Health and Cancer

Current State

- Noncommunicable diseases kill 40 million people each year – most of whom live in LMICs
- Global cost of cardiovascular disease (CVD) estimated to rise to more than $1 trillion by 2030 – CVD accounts for highest health care expenditure in most countries.
- In 2015 CVD caused 18 million deaths, while cancer caused 8.8 million deaths globally.

Cardiovascular Health and Cancer

Challenges

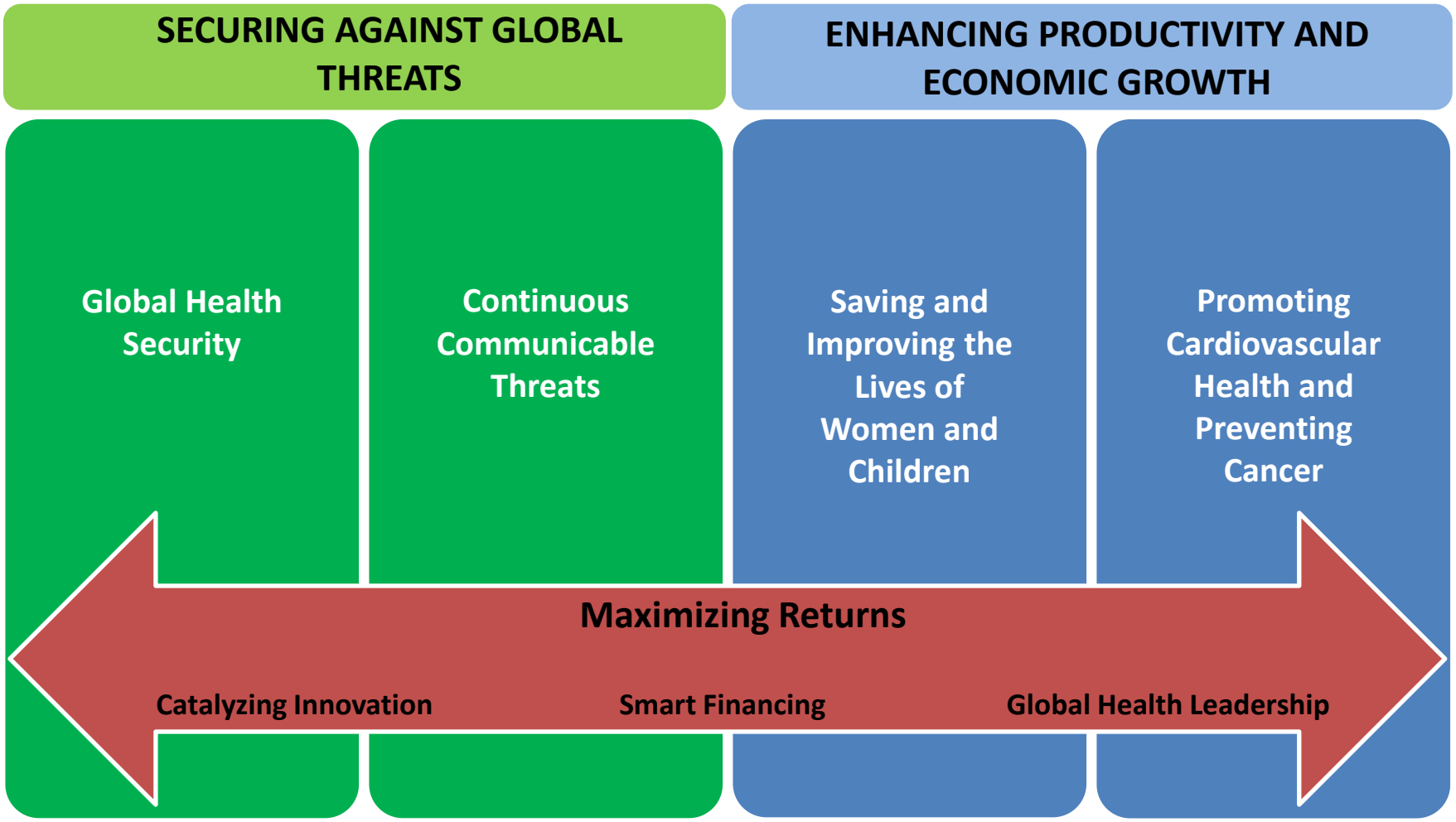
- Many CVD risk factors (e.g. hypertension) do not cause symptoms and go undiagnosed.
- 2/3 of cancer deaths in LMICs are due to late detection and poor access to care.
- Many health systems in LMICs are not designed to deliver chronic care.
- Slow-moving emergencies like NCDs often lack priority and momentum and suffer from a lack of "branding"

Cardiovascular Health and Cancer

Needed Actions

- USAID, State Department, and CDC should provide seed funding to **mobilize the private sector** to address CVD and cancer in countries
- Efforts should be coordinated with governments and **integrated** with existing platforms and community services.
- They should focus on behavioral **risk factors (smoking, alcohol use, obesity), hypertension, treatment of early cervical cancer, and immunization for HPV and Hep B**

Report Conceptual Model



Catalyzing Innovation

Current State

- Weak markets, combined with costly and uncertain R&D, results in underinvestment in medical products for neglected diseases.
- Capacity for medical product R&D in countries where diseases are endemic varies but is often weak.
- Potential for information technology advances undermined by fragmented and duplicative apps and tools.

Catalyzing Innovation

Challenges

- "Push" and "Pull" mechanisms and incentives to attract and leverage private sector investments by reducing cost, risk and market uncertainty are inadequate.
- Weak and under-resourced R&D capacity in countries (human and lab) can lead to delays in detection, diagnosis and development of new products for emerging diseases, as found with Ebola in Guinea in 2013.
- Many donors sponsor short-term, narrow goals for digital health tools in countries resulting in poor country ownership, lack of coordination, and limited interoperability

Catalyzing Innovation

Needed Actions

- U.S. agencies should develop and scale mechanisms that **reduce costs and both R&D and market risks** of developing, licensing, and introducing medical products needed for global health priorities.
- CDC, NIH (e.g. Fogarty), and DoD should **increase the number of trained people and institutions** in partner countries able to conduct clinical trials.
- U.S. agencies should work with international stakeholders to convene and create a **common digital health framework**
- U.S. agencies should expand on "build once" principle in Digital GAP Act and **align U.S. funding in digital health** to reduce duplication and fragmentation.

Smart Financing

Current State

- Low-middle-income countries have growing economies and many will soon transition from traditional foreign aid.
- Short term expenditures and vertical programs are attractive to governments and decision makers because they can be easier and attribute – but long term, cross-cutting investments can have significant returns.
- Rigorous economic analysis of the social, economic and financial return is important to ensure best use of funds and to engage private sector and new donors.
- Innovative financing mechanisms can increase the value of investment.

Smart Financing

Challenges

- Low-middle-income countries need support to transition to sustainable domestic financing. Fragile states and low-income countries still require international support for health programs.
- Contributions to health systems for goals like pandemic preparedness or to product development, e.g., for vaccines have high benefits to many countries – but are longer-term and more difficult to attribute.
- Growing opportunities to attract and leverage funding from other governments, new financing sources and private sector.

Smart Financing

Needed Actions

- Transition investments toward global public goods
  - USAID, State, and HHS should jointly assess their approach to global health funding and gear it toward **long-term, catalytic investments**.
- Optimize resources through smart financing strategies
  - USAID and PEPFAR should structure financing to **promote country ownership and domestic financing.**
  - USAID should expand use/flexibility of financing mechanisms such as **Development Credit Authority.**
  - U.S. Treasury, State, and USAID should motivate the World Bank, IMF, Global Fund, and Gavi to **promote transitions to domestic financing** and attract **alternative financing sources.**

Global Health Leadership

Current State

- Global governance for health requires involvement of organizations that directly and indirectly impact health
- Many multilateral organizations have become critical parts of the global health architecture.
- The current U.S. system for health diplomacy is not well suited to global health emergencies.

Global Health Leadership

Challenges

- WHO performs essential functions, yet is in need of reform and remains underfunded
- Lack of sufficient cross-disciplinary training leads to inefficiencies and weaknesses during health diplomacy events.
- Limited numbers of noncareer health appointments result in a lack of institutional knowledge and of a career track for global health professionals within the U.S. Foreign Service.

Global Health Leadership

Needed Actions

- State Department and HHS should use their influence to **improve the performance** of key UN agencies, especially WHO.
  - U.S. contributions to WHO should come with a requirement that reforms are adopted.
- State and HHS should **remain committed to global partnerships** such as Gavi, The Global Fund, the GHSA, and the Global Financing Facility.
- Congress should **amend the Foreign Service Act** to enable global health experts within HHS, and the State department should **create a global health career track.**

Summary

- The health and well-being of other countries directly and indirectly affect the health, safety, and economic security of Americans.
- Taking a more proactive and systematic approach will make the U.S. government's global health enterprise more efficient and cost-effective.
- U.S. global health strategy should include forward-looking policies, a long-term vision, country and international partnerships, and continued investment.

Questions?

PDF of report available for download: nationalacademies.org/USglobalhealth